**Practical Twelve – Text File Processing II**

1. Before databases and SQL, software applications use flat files to store their data. Usually in a typical application, there will be a master file containing relatively permanent data and transaction files that details transactions (e.g. sales orders, book loans and banking transactions)

In this exercise, you are given two text files BankCustMasterFile.txt and BankTransactions.txt.

The first line of the file consists of the heading (field names) describing the data stored in that position. Each field is comma separated.

BankCustMasterFile.txt is sorted sequentially by NRIC while BankTransactions.txt is sorted in chronological order (i.e. Date and time).

Write a function DisplayMenu to display the following user options:

1. Add Bank Transaction
2. Update All Transactions
3. Query Balance by NRIC
4. Display all Transactions by NRIC
5. ‘Q’ to quit

Implement each of the options in separate functions:

1. Add Bank Transaction

* Get user input for NRIC, Date, Time and TransAmt
* Do appropriate validation
* Append record to the BankTransactions.txt file. (assume it is chronologically correct)

1. Update All Transactions

* When this option is selected, all transactions amount must be updated. For every deposit or withdrawal, the BankCustMasterFile.txt AccountBal field must be updated (hint: sort transactions records by NRIC first then update the master file).
* Once updated, all transaction records should be archived to a file Archived.txt with the same format as BankTransactions.txt (no need for any sort order for Archived.txt).
* The BankTransactions.txt must then have zero records (only the headings left).
* Display a message “Update Successful” at the end of the update run.

1. Query Balance by NRIC

* Ask user for NRIC and retrieve the AccountBal from the master file.
* If found, display result in this format

“Jane Doe has $30,933 in account.” (insert the dollar sign and comma(s) appropriately)

1. Display all Transactions by NRIC

* Ask user for NRIC.
* Find all transactions of this NRIC in the transaction files (current and archived)
* Display each transaction in one line in chronological order (earliest to latest)